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ABSTRACT

These item specifications were developed as a part of the Arkansas "Minimum Performance Testing Program" (MPT). There is one item specification for each instructional objective included in the MPT. The purpose of an item specification is to provide an overview of the general content and format of test items used to measure an instructional objective. Specifically, each item contains: (1) an objective identification number; (2) grade level; (3) subject area; (4) goal identification; (5) skill description; (6) stimulus attributes; (7) response attributes; and (8) sample items. It is suggested that teachers may use these specifications in a variety of ways. Teachers may use them as a guide in the development of evaluation instruments to check student performance, inform parents about what their child will face on the MPT, and familiarize their students with the MPT. Covered in this guide are items which test whole number numeration, whole number operations, rational numbers, measurement, geometry, and probability and statistics. (CW)

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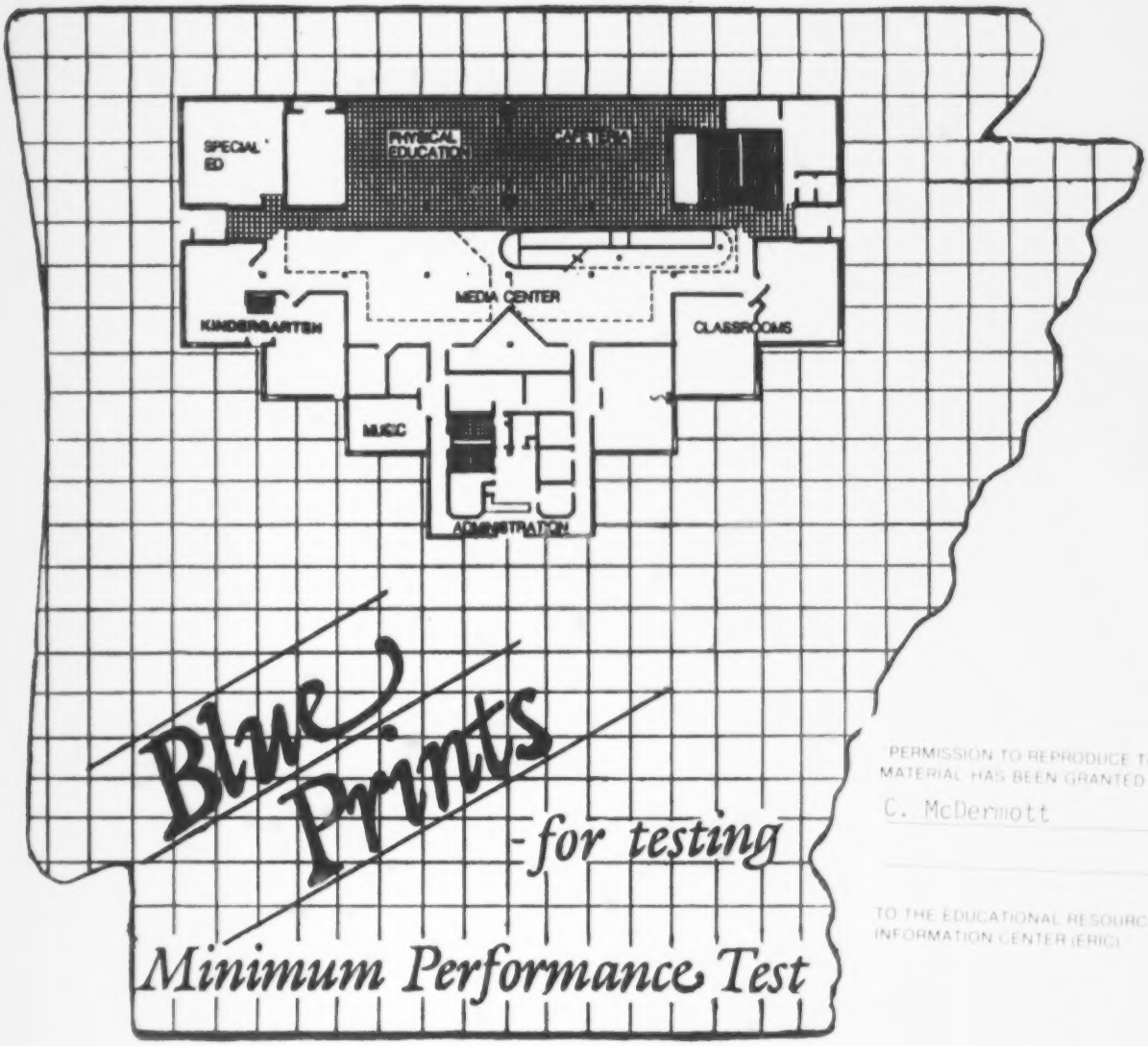

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Item Specifications

Mathematics
Grade 3

SE051679

INTRODUCTION

These Item Specifications were developed by the Department of Education as part of the Arkansas Minimum Performance Testing Program (MPT). There is one Item Specification for each instructional objective included in the MPT. While all objectives are not necessarily tested every year, every objective included here may appear in the MPT.

The purpose of an Item Specification is to provide an overview of the general content and format of test items used to measure an instructional objective. Specifically, each Item Specification contains the following information:

* *Objective Identification Number*
* *Grade Level*
* *Subject Area*
* *Goal Identification*
* *Skill Description*
* *Stimulus Attributes (Format, Content, Directions)*
* *Response Attributes (Format, Content, Directions)*
* *Sample Item(s)*

The first five elements listed above are consistently labeled and defined to correspond with the Teachers' Guide and MPT materials. The Stimulus Attributes section contains information about the item stem (the question of incomplete statement that makes up the test question). Similarly, the Response Attributes section contains information about the correct answer and about possible incorrect answers. The Sample Item section provides examples of a test item or items which are similar to the items which may appear on the MPT.

These Item Specifications may be used in a variety of ways. Teachers may use them to guide them in the development of information evaluation instruments to determine whether or not students have mastered specific objectives. Teachers may also use these Item Specifications to inform parents about what their children will experience when they take the MPT. Teachers may also use these Item Specifications to familiarize students with what to expect on the MPT.

School administrators may used these Item Specifications when they communicate to the public about the MPT. The sample items may be useful in illustrating what mastery of an objective means.

It is important to understand that use of these Item Specifications does not in any way invalidate the MPT. None of the test items on these Item Specifications have appeared or will ever appear on the MPT. Using these Item Specifications in the classroom or as part of the instructional process is **NOT** teaching the test!

OBJECTIVE: 1.1

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER NUMERATION**

SKILL: Identify odd or even numbers to 20.

STIMULUS ATTRIBUTES:

A. Format a direct question such as: Which is an odd (even) number?

B. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four numbers, less than or equal to 20, listed vertically in random order

B. Options correct response: the odd (even) number
distractors: even (odd) numbers

SAMPLE ITEMS:

1. **Which is an odd number?**

   A 12
   B 6
   C 18
   *D 17

2. **Which is an even number?**

   *A 8
   B 3
   C 17
   D 11

OBJECTIVE: 1.2

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER NUMERATION**

SKILL: Identify the place value of each digit in a three-digit number.

STIMULUS ATTRIBUTES:

A. Format a direct question or incomplete sentence such as:

Type 1 Which digit is in the (ones, tens, or hundreds) place in (_____)?

Type 2 Which number has a (__) in the (ones, tens, or hundreds) place?

Type 3 (___) means:

B. Content

Type 1 any three-digit number not containing zero

Type 2 any one-digit number including zero

Type 3 any three-digit number not containing zero

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four digits listed vertically in random order

Type 2 four three-digit numbers listed vertically in random order

Type 3 four place value descriptors limited to ones, tens, hundreds and thousands listed vertically in random order

B. Options

Type 1 correct response: the digit requested in the stimulus
distractors:
a. other digits from the stimulus number
b. any other digit

Type 2 correct response: the number requested in the stimulus
distractors:
a. other arrangements of the digits in the correct response
b. any three-digit number containing the stimulus digit in a position other than the correct response

Type 3 correct response: the place value requested in the stimulus
distractors: stimulus digits in incorrect place value position

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SAMPLE ITEM: *Type 1*

1. Which digit is in the tens place in 763?

A 3
B 7
C 2
* **D** 6

SAMPLE ITEM: *Type 2*

2. Which number has a 6 in the ones place?

* **A** 436
B 632
C 364
D 634

SAMPLE ITEM: *Type 3*

3. 482 means:

A 8 hundreds, 4 tens, 2 ones.
* **B** 4 hundreds, 8 tens, 2 ones.
C 8 tens, 4 ones, 2 hundreds.
D 4 ones, 8 hundreds, 2 thousands.

OBJECTIVE: 1.3

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER NUMERATION**

SKILL: Compare two three-digit numbers to indicate greater than, less than and equal to using the signs.

STIMULUS ATTRIBUTES:

A. Format

Type 1 a direct question such as: Which is true?

Type 2 a direct question such as: Which sign belongs in the box?

B. Content

Type 1 N/A

Type 2 three-digit positive numbers

C. Directions

Types 1 and 2 N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four inequalities or equations listed vertically in random order

Type 2 three signs listed vertically

B. Content

Type 1 three-digit positive numbers

Types 1 and 2 signs limited to >, <, and =

C. Options

Type 1 correct response: the true relationship between two numbers
distractors: false statements of equality or inequality

Type 2 correct response: the sign that makes the stimulus true
distractors: two other signs

SAMPLE ITEM: *Type 1*

1. Which is true?

- ***A** 912 > 734
- **B** 919 < 785
- **C** 116 = 119
- **D** 181 > 200

SAMPLE ITEM: *Type 2*

2. Which sign belongs in the box?

912 ☐ 734

- ***A** >
- **B** <
- **C** =

OBJECTIVE: 1.4

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER NUMERATION**

SKILL: Match the standard number with its word name up through the hundreds place.

STIMULUS ATTRIBUTES:

A. Format

Type 1 a boxed standard number preceded by a direct question or statement such as: Choose the word name for the number in the box.

Type 2 a boxed word name for a number preceded by a statement such as: Choose the number for the word name in the box.

B. Content

Type 1 a two- or three-digit number excluding zero in the hundreds place

Type 2 a word name for a two- or three-digit number

C. Directions

Types 1 and 2 N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four word names for numbers listed vertically in random order

Type 2 four numbers listed vertically in order of increasing or decreasing magnitude

B. Options

Type 1 correct response: the word name for the stimulus number
distractors:
a. word names using the stimulus digits in different place values
b. digit names without place value (one, two, etc.)

Type 2 correct response: the number for the stimulus word name
distractors:
a. numbers using the stimulus digits in different place values
b. numbers with added, repeated digits
c. stimulus digit with zero inserted

SAMPLE ITEM: *Type 1*

1. **Choose the word name for the number in the box.**

356

A three five six
B six hundred thirty-five
***C** three hundred fifty-six
D five hundred thirty-six

SAMPLE ITEM: *Type 2*

2. **Choose the number for the word name in the box.**

seventy-four

A 47
***B** 74
C 477
D 704

OBJECTIVE: 1.5

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER NUMERATION**

SKILL: Order and identify the position of objects using ordinal numbers eleventh through twentieth.

STIMULUS ATTRIBUTES:

A. Format

Type 1 twenty horizontal squares with four shapes (e.g., star, x, triangle, circle) followed by a direct question such as: Which box has a ( )? or Which shape is in the ( ) box?

Type 2 twenty horizontal squares with a lower case letter of the alphabet in each square followed by a direct question such as: Which letter is in the ( ) box?

Type 3 a statement using an eleven or twelve-digit telephone number followed by a direct question such as: What was the 11th number?

B. Content

Type 1 shapes (NOT letters or digits) in positions 11th through 20th with the first box shaded

Type 2 lower case letters starting with "a" in positions 1st through 20th

Type 3 an eleven or twelve-digit telephone number

C. Directions

Type 1 Use the pattern below to answer question ( ). The shaded box is FIRST.

Type 2 Use the pattern below to answer question ( ). The letter **a** is in the FIRST box.

Type 3 N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four ordinal numbers, 11th through 20th, or four symbols listed vertically in order of increasing or decreasing magnitude, if numeric

Type 2 four letters listed vertically in random order

Type 3 four numbers listed vertically in order of increasing or decreasing magnitude

B. Options

Type 1

correct response: the ordinal number of the box or the shape requested in the stimulus

distractors:

a. ordinal numbers or shapes for the box before and after the correct response
b. any other shape or ordinal number not to exceed the actual number of boxes shown

Type 2

correct response: the letter requested in the stimulus

distractors:

a. lower case letters for the box before and after the correct response
b. any other lower case letters named in the boxes

Type 3

correct response: the eleventh digit in the stimulus number

distractors: any other digits in the stimulus number

OBJECTIVE: 1.5 (cont.)

SAMPLE ITEMS: *Type 1*

Use the pattern below to answer questions 1 and 2. The shaded box is FIRST.

1. **Which box has a ● ?**

   A 9th
   B 11th
   C 12th
   * **D** 16th

2. **What shape is in the 18th box.?**

   A ●
   * **B** ■
   C ★
   D ▲

SAMPLE ITEM: *Type 2*

Use the pattern below to answer question 3. The letter a is in the FIRST box.

3. **Which letter is in the 12th box?**

   A j
   B k
   * **C** l
   D m

SAMPLE ITEM: *Type 3*

3. **Claudia dialed this telephone number: 1-316-563-2794.**
   What is the 11th number she dialed?

   A 1
   B 2
   * **C** 4
   D 9

OBJECTIVE: 2.1

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Add three one-digit numbers.

STIMULUS ATTRIBUTES:

A. Format an addition problem arranged vertically or horizontally (X + Y + Z =) with an operational symbol

B. Content three one-digit numbers which may include zero

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four numbers listed vertically in order of increasing or decreasing magnitude

B. Options correct response: the sum of the stimulus problem
distractors:
a. sum of any two addends
b. sum that differs by one from the correct response

SAMPLE ITEMS:

1.
```
   7
   2
 + 3
---
```

* **A** 12
B 11
C 9
D 5

2. 7 + 2 + 3 = ☐

A 5
B 9
C 11
***D** 12

OBJECTIVE: 2.2

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Add two two-digit numbers with regrouping.

STIMULUS ATTRIBUTES:

A.	**Format**	an addition problem arranged vertically or horizontally (XX + YY =) with an operational symbol
B.	**Content**	2 two-digit numbers with the sum of the ones digit greater than nine
C.	**Directions**	N/A

RESPONSE ATTRIBUTES:

A.	**Format**	four numbers listed vertically in order of increasing or decreasing magnitude
B.	**Options**	correct response: the sum of the stimulus problem distractors: a. sum without regrouping b. digit carried in the sum c. difference of the stimulus problem d. other addition errors

---

SAMPLE ITEMS:

1.
$$\begin{array}{r} 76 \\ +\ 18 \\ \hline \end{array}$$

A 58
B 84
* C 94
D 814

2. 76 + 18 = ☐

A 814
* B 94
C 84
D 58

OBJECTIVE: 2.3

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Use addition as the checking operation of subtraction.

STIMULUS ATTRIBUTES:

A. Format a boxed subtraction problem arranged vertically with the operational symbol and solution preceded by a statement such as: Choose the correct way to check the subtraction problem in the box below.

B. Content
1. one- or two-digit numbers
2. no regrouping

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four problems listed vertically with addition or subtraction symbols

B. Options correct response: the problem which checks the stimulus problem
distractors:
a. problems with the same or different number combinations
b. use of different operational symbols

SAMPLE ITEM:

1. **Choose the correct way to check the subtraction problem in the box below.**

```
  65
- 43
  22
```

A
```
  43
- 22
```

B
```
  65
+ 43
```

* C
```
  22
+ 43
```

D
```
  65
+ 22
```

OBJECTIVE: 2.4

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Subtract two-digit numbers with regrouping.

STIMULUS ATTRIBUTES:

A. Format a subtraction problem arranged vertically or horizontally (XX - YY =) with an operational symbol

B. Content 2 two-digit numbers which require regrouping

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four numbers listed vertically in order of increasing or decreasing magnitude

B. Options correct response: the difference between the stimulus numbers
distractors:
a. sum of the stimulus problem
b. difference without regrouping
c. error in regrouping from left to right
d. difference between the smaller and larger digit in each place

---

SAMPLE ITEMS:

1.
$$\begin{array}{r} 83 \\ -\ 67 \\ \hline \end{array}$$

* **A** 16
B 24
C 26
D 150

2. 83 - 67 = ☐

* **A** 16
B 24
C 26
D 150

OBJECTIVE: 2.5a

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Identify and use the symbol and terms for multiplication (x, times, multiply).

STIMULUS ATTRIBUTES:

A. Format a direct question such as:

Type 1 Which means multiply?

Type 2 Which means the same as ( ) times ( )?

Type 3 In the problem (x), what does the x mean?

B. Directions N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four operational symbols listed vertically in random order

Type 2 four problems using different operational symbols listed vertically

Type 3 four words denoting the four operational symbols (add, subtract, multiply, divide) listed vertically in random order

B. Options

Type 1 correct response: the symbol for multiplication (x)
distractors: other operational symbols

Type 2 correct response: the multiplication problem
distractors: problems with other operational symbols

Type 3 correct response: multiply
distractors: words denoting the three other operations (add, subtract, divide)

SAMPLE ITEM: *Type 1*

1. Which means multiply?

A +
• B x
C ÷
D -

SAMPLE ITEM: *Type 2*

2. Which means the same as 3 times 2 ?

A 3 - 2
B 3 ÷ 2
C 3 + 2
• D 3 x 2

SAMPLE ITEM: *Type 3*

3. In the problem 2 x 8, what does the x mean?

A add
B divide
C subtract
• D multiply

OBJECTIVE: 2.5b

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Identify and <u>use</u> the symbol (x) for multiplication.

STIMULUS ATTRIBUTES:

A. Format a multiplication problem arranged horizontally (X x Y =) or vertically with the operational symbol

B. Content one factor 0 through 10, the other 0 through 5

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four numbers listed vertically in order of increasing or decreasing magnitude

B. Options <u>correct response</u>: the product of the stimulus problem
<u>distractors</u>:
a. sum of the stimulus numbers
b. difference between the stimulus numbers
c. quotient of the stimulus numbers
d. reversal of digits in the product
e. multiplication fact error

SAMPLE ITEMS:

1.
$$\begin{array}{r} 9 \\ \times\ 5 \\ \hline \end{array}$$

A 4
B 14
* C 45
D 54

2. 9 x 5 = ☐

A 54
* B 45
C 14
D 4

OBJECTIVE: 2.7

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Identify and define: factor, product, quotient.

STIMULUS ATTRIBUTES:

A. Format

Type 1 a boxed multiplication problem with the solution, arranged horizontally or vertically, preceded by a direct question such as: What is the (_____) in the problem?

Type 2 a boxed division problem with the solution preceded by a direct question such as: What is the (_____) in the problem?

Type 3 a direct question such as: What is the answer called in (multiplication or division)?

B. Content

Type 1 one factor 0 through 9, the other factor 0 through 5.

Types 2 and 3 N/A

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four mathematical terms listed vertically in random order

B. Content

Types 1, 2, and 3 terms limited to factor, product, quotient, sum, difference, dividend or divisor

C. Options

Type 1 correct response: term requested in the stimulus (factor, product)
distractors: other terms from the content list

Type 2 correct response: term requested in the stimulus (quotient)
distractors: other terms from the content list

Type 3 correct response: term requested in the stimulus (product, quotient)
distractors: other terms from the content list

SAMPLE ITEMS: *Type 1*

1. What is the 2 in the problem?

2 x 5 = 10

- A sum
- * B factor
- C product
- D quotient

SAMPLE ITEM: *Type 2*

2. What is the 5 in the problem?

15 ÷ 3 = 5

- A sum
- B factor
- C product
- * D quotient

SAMPLE ITEM: *Type 3*

3. What is the answer called in multiplication?

- A factor
- * B product
- C quotient
- D difference

OBJECTIVE: 2.8a

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Identify and use the symbols and terms for division (÷, divide, divided by).

STIMULUS ATTRIBUTES:

A. Format

Type 1 a direct question such as: Which sign means to divide?

Type 2 a direct question such as: Which means the same as ( ) divided by ( )?

Type 3 an incomplete sentence such as: (÷) is used for:

Type 4 a direct question such as: In the problem (____÷____), what does the ÷ sign mean?

B. Content

Types 1, 2, 3, and 4 division terms and symbols from the skill list

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four operational symbols (+, -, x,÷) listed vertically in random order

Type 2 four problems with operational signs listed vertically

Type 3 four operational words listed vertically in random order

Type 4 four operational words listed vertically in random order

B. Options

Type 1 correct response: the division symbol
distractors: operational symbols for addition, subtraction and multiplication

Type 2 correct response: the division problem
distractors: problems using operational symbols for addition, subtraction and multiplication

Type 3 correct response: division
distractors: addition, subtraction and multiplication

Type 4 correct response: divided by
distractors: added to, multiplied by, and subtracted from

OBJECTIVE: 2.8b

GRADE 3: MATHEMATICS **GOAL: WHOLE NUMBER OPERATIONS**

SKILL: Identify and <u>use</u> the symbols and terms for division (÷ , divide, divided by).

STIMULUS ATTRIBUTES:

A. Format a division problem using a division symbol or term ($x \div y = \square$, divide, divided by)

B. Content
1. one factor 0 through 10, the other 0 through 5
2. quotient a whole number

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format four numbers listed vertically in order of increasing or decreasing magnitude

B. Options

<u>correct response</u>: quotient requested in stimulus

<u>distractors</u>:
a. sum of stimulus numbers
b. product of stimulus numbers
c. difference between stimulus numbers
d. division error

SAMPLE ITEMS:

1. $9 \div 3 = \square$

• **A** 3
B 6
C 12
D 27

2. Divide 9 by 3.

• **A** 3
B 6
C 12
D 27

3. 32 divided by 4 is ( ).

A 128
B 36
C 28
• **D** 8

OBJECTIVE: 3.1

GRADE 3: MATHEMATICS **GOAL: RATIONAL NUMBERS**

SKILL: Match fractions with denominators of four or less with appropriate shaded regions or portions of sets.

STIMULUS ATTRIBUTES:

A. Format

Type 1 a circle, square or rectangle divided into equal parts with a fractional part shaded preceded by a direct question such as: What part of the figure below is shaded?

Type 2 a direct question such as: Which figure below shows ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$) shaded?

B. Content

Type 1 figure divided into no more than four equal parts

Type 2 denominators of 4 or less

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four fractions listed vertically in random order

Type 2 four congruent figures placed in random order

B. Content

Type 1 fractions with denominators of 4 or less

Type 2 squares, circles or rectangles divided into four or fewer equal parts

C. Options

Type 1 correct response: fraction representing shaded portion of the figure
distractors: three proper fractions with denominators of 4 or less

Type 2 correct response: figure with stimulus fraction shaded
distractors: the same figure repeated with other fractions shaded

SAMPLE ITEM: *Type 1*

1. What part of the figure below is shaded?

A $\frac{2}{3}$

B $\frac{1}{4}$

• C $\frac{1}{3}$

D $\frac{1}{2}$

2. Which figure below shows $\frac{1}{4}$ shaded?

A B • C D

OBJECTIVE: 4.1

GRADE 3: MATHEMATICS **GOAL: MEASUREMENT**

SKILL: Tell and write time to the nearest five minutes.

STIMULUS ATTRIBUTES:

A. Format

Type 1 line drawing of a clock face preceded by a direct question such as: What time does the clock below show?

Type 2 a direct question such as: Which clock shows ( )?

B. Content

Type 1 clock face with an hour hand and a minute hand pointing to a labeled time to the nearest five minutes

Type 2 time requested to the nearest five minutes

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four indicators of time listed vertically in numeric order

Type 2 four clock faces indicating time to the nearest 5 minutes placed in random order

B. Options

Type 1 correct response: time requested in the stimulus
distractors:
a. reversal of hour and minute
b. failure to count by fives
c. incorrect counting by fives

Type 2 correct response: the clock requested in the stimulus
distractors:
a. clock with reversal of hour and minute
b. clocks with other times

SAMPLE ITEM: *Type 1*

1. What time does the clock below show?

A 2:15
B 2:45
C 9:02
* **D** 9:10

SAMPLE ITEM: *Type 2*

2. Which clock shows 4:40?

A

B

* **C**

D

OBJECTIVE: 4.2

GRADE 3: MATHEMATICS **GOAL: MEASUREMENT**

SKILL: Read a calendar to tell day, date, month and year.

STIMULUS ATTRIBUTES:

A. Format a line drawing of a calendar followed by a direct question such as:

Type 1 On what day does (month and day) fall?

Type 2 What is the date of the (FIRST Monday, SECOND Tuesday, etc.) shown on the calendar?

Type 3 What month is shown on the calendar?

Type 4 What year is shown on the calendar?

B. Content

Types 1 - 4 calendar labeled with days, dates, month and year

C. Directions

Types 1 - 4 Use the calendar below to answer question ( ).

RESPONSE ATTRIBUTES:

A. Format

Type 1 four days listed vertically in chronological order

Type 2 four dates listed vertically in chronological order

Type 3 four months listed vertically in chronological order

Type 4 four years listed vertically in chronological order

B. Options

Type 1 correct response: name of the day requested in the stimulus
distractors: names of other days

Type 2 correct response: date corresponding to the day requested in the stimulus
distractors: other dates shown on the calendar

Type 3 correct response: name of the month shown on the calendar
distractors: names of other months

Type 4 correct response: year shown on the calendar
distractors: other years

OBJECTIVE: 4.2 (cont.)

SAMPLE ITEM: *Type 1*

Use the calendar below to answer questions 1 and 2.

April 1985						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1. **On what day does April 21 fall?**

   • **A** Sunday
   B Tuesday
   C Thursday
   D Friday

SAMPLE ITEM: *Type 2*

2. **What is the date of the FIRST Wednesday shown on the calendar?**

   • **A** April 3
   B April 10
   C April 19
   D April 30

SAMPLE ITEM: *Type 3*

Use the calendar below to answer questions 3 and 4.

June 1985						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

3. **What month is shown on the calendar?**

   A January
   B March
   • **C** June
   D November

SAMPLE ITEM: *Type 4*

4. **What year is shown on the calendar?**

   A 1982
   B 1983
   C 1984
   • **D** 1985

OBJECTIVE: 4.3

GRADE 3: MATHEMATICS **GOAL: MEASUREMENT**

SKILL: Count change in coins not to exceed $1.00.

STIMULUS ATTRIBUTES:

A. Format

Type 1 boxed drawings of coins preceded by a direct question such as: How much money is shown below?

Type 2 A direct question such as: Which group of coins shows ( ) cents?

B. Content

Type 1 a variety of coins (excluding half dollars) with those of the same value grouped from greatest to least

Type 2 amount requested not to exceed $1.00

C. Directions

Types 1 and 2 N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four amounts of money not exceeding $1.00 listed vertically in order of increasing or decreasing magnitude

Type 2 four boxed groups of coins arranged greatest to least by value and placed vertically in random order

B. Options

Type 1 correct response: the amount of the coins requested in the stimulus
distractors: other amounts of money

Type 2 correct response: the group of coins requested in the stimulus
distractors: other groups of coins

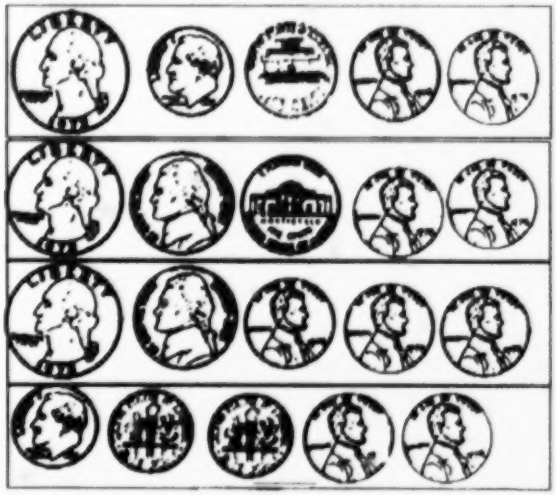
SAMPLE ITEM: Type 1

1. How much money is shown below?

A 43 cents
• B 48 cents
C 58 cents
D 73 cents

SAMPLE ITEM: *Type 2*

2. Which group of coins shows 38 cents?



OBJECTIVE: 4.4

GRADE 3: MATHEMATICS **GOAL: MEASUREMENT**

SKILL: Read a ruler to the nearest inch and half-inch.

STIMULUS ATTRIBUTES:

A. Format a ruler and an object to be measured preceded by a direct question such as: To the nearest inch (half-inch) how long is the ( ) below?

B. Content ruler calibrated in $\frac{1}{2}$ inches with inches labeled

C. Directions N/A

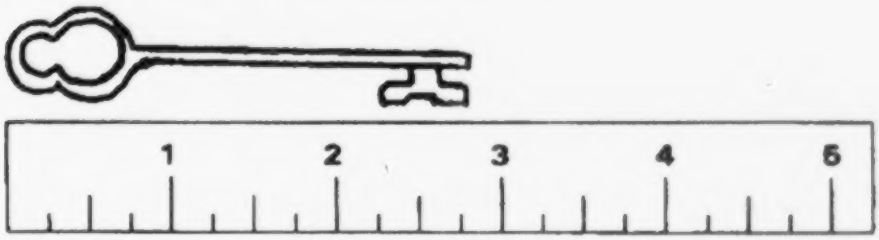
RESPONSE ATTRIBUTES:

A. Format four labeled measurements listed in order of increasing or decreasing magnitude

B. Options correct response: the measurement requested in the stimulus
distractors:
1. the correct response + or - one, two, or three units
2. other measurements

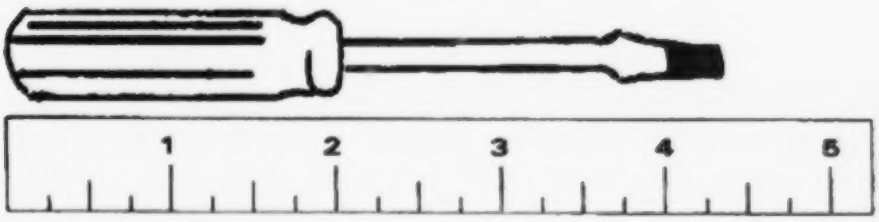
SAMPLE ITEMS:

1. To the nearest inch, how long is the key below?



A 2 inches
* B 3 inches
C 4 inches
D 5 inches

2. To the nearest $\frac{1}{2}$ inch, how long is the screwdriver below?



A $1\frac{1}{2}$ inches
B 2 inches.
C $3\frac{1}{2}$ inches
* D $4\frac{1}{2}$ inches

OBJECTIVE: 4.5

GRADE 3: MATHEMATICS **GOAL: MEASUREMENT**

SKILL: Read a scale to the nearest pound.

STIMULUS ATTRIBUTES:

A. Format

Type 1 a line drawing of a scale preceded by a direct question such as: How many pounds are shown on the scale below?

Type 2 a direct question such as: Which scale below shows ( ) pounds?

B. Content

Type 1 scale with an arrow as the fixed center point, calibrated in pounds and labeled at five pound intervals with the tens' lines and numerals being larger

Type 2 N/A

C. Directions

Types 1 and 2 N/A

RESPONSE ATTRIBUTES:

A. Format

Type 1 four weights listed vertically in order of increasing or decreasing magnitude

Type 2 four line drawings of scales placed in random order

B. Content

Type 1 numbers labeled with pounds

Type 2 scales with arrows as the fixed center points, calibrated in pounds, and labeled at five pound intervals with the tens' lines and numerals being larger

C. Options

Type 1 correct response: the number of pounds shown on the stimulus scale
distractors: numbers that differ two or more pounds from the correct response

Type 2 correct response: the scale showing the number of pounds requested in the stimulus
distractors: drawings of scales showing weights that differ two or more pounds from the weight requested in the stimulus

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SAMPLE ITEM: Type 1

1. How many pounds are shown on the scale below?

A 23 pounds
B 25 pounds
* C 28 pounds
D 31 pounds

SAMPLE ITEM: Type 2

2. Which scale below shows 28 pounds?

* A

B

C

D

OBJECTIVE: 5.1

GRADE 3: MATHEMATICS **GOAL: GEOMETRY**

SKILL: Locate points inside, outside and on geometric figures.

STIMULUS ATTRIBUTES:

A. Format a simple closed curve with four points followed by a direct question such as: Which point is (inside, outside, on) the shape?

B. Content points labeled M, N, O, and P ensuring only one correct answer.

C. Directions Use the figure below to answer question ( ).

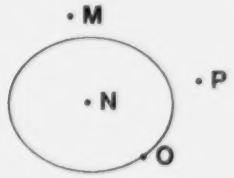
RESPONSE ATTRIBUTES:

A. Format four capital letters (M, N, O, P) listed vertically in alphabetical order

B. Options correct response: the letter of the point requested in the stimulus
distractors: other letters from the stimulus

SAMPLE ITEM:

Uses the figure below to answer question 1.



1. Which point is on the circle?

A M
B N
*C O
D P

OBJECTIVE: 5.2

GRADE 3: MATHEMATICS **GOAL: GEOMETRY**

SKILL: Match congruent shapes.

STIMULUS ATTRIBUTES:

A. Format a direct statement such as: Choose the figure that is the same size and shape as the figure on the left.

B. Content N/A

C. Directions N/A

RESPONSE ATTRIBUTES:

A. Format five geometric figures placed horizontally with the first shape isolated by two heavy vertical lines

B. Content
1. first figure limited to a circle, a square, a triangle, or a rectangle
2. figures 2 through 5 labeled A,B,C,D

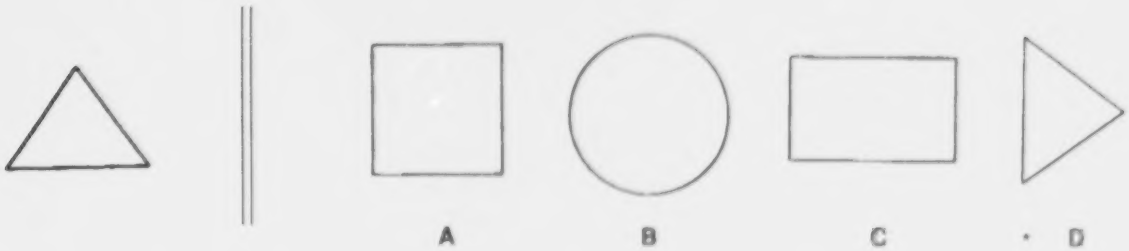
C. Options

correct response: the figure that is the same size and shape as the figure shown on the left (can be rotated)

distractors:
1. same shape as the stimulus but a different size
2. other geometric figures with similar attributes as the correct response
3. any other geometric shape

SAMPLE ITEM:

1. **Choose the figure that is the same size and shape as the figure on the left.**



OBJECTIVE: 6.1

GRADE 3: MATHEMATICS **GOAL: PROBABILITY AND STATISTICS**

SKILL: Interpret simple tables and charts.

STIMULUS ATTRIBUTES:

A. Format a chart or table followed by a direct question requiring specific information

B. Content
1. a table having two columns of no more than four items each
2. a chart having three vertical by three horizontal entries
3. vocabulary Grade 3 or below
4. numbers limited to 1, 2, or 3 digits
5. chart or table titled and labeled

C. Directions Use the table (chart) below to answer question ( ).

RESPONSE ATTRIBUTES:

A. Format four pieces of information from the stimulus listed vertically; words in the same order as the chart or table, numbers in ascending or descending order of magnitude

B. Options correct response: the information requested in the stimulus question
distractors:
1. other information from the stimulus table or chart
2. information NOT shown on the stimulus table or chart but relevant to its content

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SAMPLE ITEMS:

Use the chart below to answer question 1.

Mileage Chart

	Downer	Sun City	Hill Town
Downer	___	356	428
Sun City	356	___	521
Hill Town	428	521	___

1. **How many miles is it from Sun City to Hill Town?**

   A 356
   B 428
   * C 521
   D 653

Use the table below to answer question 2.

Number of Students in the Third Grade

Class	Number of Students
Jones	24
Phillips	19
Kelley	22

2. **How many students are in Jones' and Phillips' classes?**

   A 19
   B 22
   C 24
   * D 43

OBJECTIVE: 6.2

GRADE 3: MATHEMATICS **GOAL: PROBABILITY AND STATISTICS**

SKILL: Interpret simple bar graphs.

STIMULUS ATTRIBUTES:

A. Format a bar graph followed by a question requiring specific information from the graph

B. Content
1. vocabulary Grade 3 or below
2. no more than four horizontal or vertical bars which do NOT represent fractional parts
3. fractional parts not represented by bars
4. consecutive numbers on the scale not exceeding 10
5. graph labeled and titled

C. Directions Use the graph below to answer question ( ).

RESPONSE ATTRIBUTES:

A. Format four pieces of written information from the stimulus graph listed vertically in the order given on the graph; numeric information listed vertically in order of increasing or decreasing magnitude

B. Options correct response: the information requested in the stimulus question
distractors: other similar information from the stimulus graph

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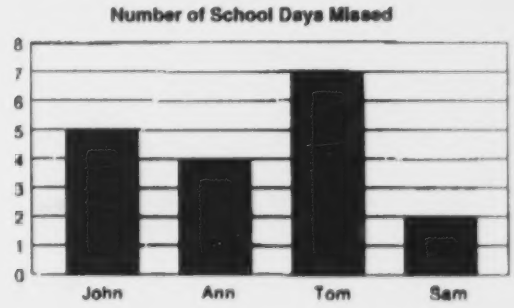
SAMPLE ITEMS:

Use the graph below to answer questions 1 and 2.



1. **Which child missed 2 days of school?**

   A John
   B Ann
   C Tom
   * **D** Sam

2. **How many days has Ann missed school?**

   A 2
   * **B** 4
   C 5
   D 7

END

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